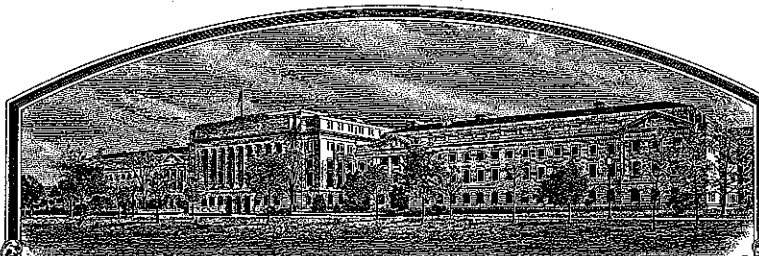


No.

200500273



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Monsanto Company*

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Neosho'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this seventeenth day of March, in the year two thousand and six.*

Attest:

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Secretary of Agriculture

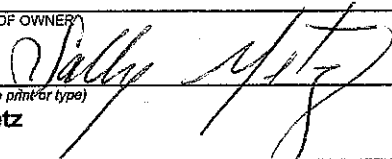


U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER <b>Monsanto Company</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>96x1311-01</b>	3. VARIETY NAME <b>Neosho</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <b>800 N. Linbergh Blvd. Mail Zone: E3NA Creve Coeur, MO 63167</b>		5. TELEPHONE (include area code) <b>314.694.6089</b>	FOR OFFICIAL USE ONLY PVPO NUMBER <b>200500273</b> FILING DATE <b>JUNE 9, 2005</b>
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>		6. FAX (include area code) <b>314.694.7250</b>	
8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Delaware</b>		9. DATE OF INCORPORATION <b>1933</b>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Ms. Sally Metz 800 N. Linbergh Blvd. Creve Coeur, MO 63167</b>			FILING AND EXAMINATION FEES: \$ <b>3,652.00</b> DATE <b>6/9/05</b> CERTIFICATION FEE: \$ <b>768.00</b> DATE <b>3/03/2006</b>
11. TELEPHONE (Include area code) <b>314.694.6089</b>	12. FAX (Include area code)	13. E-MAIL	
14. CROP KIND (Common Name) <b>Hard Red Winter Wheat</b>	16. FAMILY NAME (Botanical) <b>Gramineae</b>	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP <b>Triticum aestivum</b>	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> X YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23) 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input type="checkbox"/> XCERTIFIED 22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) <b>Sally Metz</b>		NAME (Please print or type)	
CAPACITY OR TITLE <b>Director Wheat Technology</b>	DATE <b>4-22-05</b>	CAPACITY OR TITLE	DATE

## INSTRUCTIONS

200500273

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/tsg/seed.htm>.

## ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;  
(2) the details of subsequent stages of selection and multiplication;  
(3) evidence of uniformity and stability; and  
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;  
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and  
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

The variety 'Neosho' will be constituted from Breeder seed, and proceed through Foundation, Registered and Certified in succeeding generations. Generations which may be multiplied will be limited to Breeder seed, Foundation, Registered and Certified.

**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Certified seed stocks of Neosho will be available in the Fall of 2005.

**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

2

***Exhibit A.***  
***Origin and Breeding History of Neosho***

The cross that produced Neosho was made in the greenhouse in 1996 and designated 96x1311. The cross was between W91-376-20 x W95-084. W91-376-20 was derived from Victory x W95-134. W95-134 was derived from Sierra x WI 88-052. WI 88-052 was derived from 82F2 4024#2 x Mesa. 88F2 4024#2 was derived from C78-244 x Arthur. On the male side of the pedigree, W95-084 was derived from Heyne sib x Thunderbird. 96x1311 was grown in the greenhouse as an F1 in 1997. It was grown as an F2 population in Nardin, OK in 1997. The F2 plot was harvested in bulk and the seed screened using a gravity table. Larger and heavier F3 seed from this cleaning was planted in Nardin, OK in 1998. The F3 plot was harvested in bulk and the F4 seed cleaned using a gravity table and space planted in the fall of 1998 in Berthoud, CO. During the spring of 1999 individual F4 plants were selected based upon plant height, stem strength, head size and yield potential. In 1999 F5 seed from a single plant designated 96x1311-01 was planted in short rows in Wichita, KS and selected during the late spring for plant height, lodging resistance, improved disease resistance and yield potential. In 2000 the line 96x1311-01 was tested in preliminary yield trials, in 2001 it was tested in advanced trials at 5 locations. In 2002-2004 it was tested in the Agripro commercial trial planted at 12 locations. In 2003-2004 96x1311-01 was tested in the Southern Regional Performance Nursery and in 2004 it was tested in the Kansas State University Wheat Performance Tests. In 2002 12 head rows from 96x1311-01 were harvested based upon uniformity and type. In 2003 12 plots were grown at Berthoud, CO and harvested in bulk to form the initial breeders seed. In 2004 this seed was increased to produce 225 bushels of seed that formed the primary breeders seed. In the fall of 2004 this seed was planted under irrigated conditions to produce Foundation seed for fall 2005. 96x1311-01 has been stable and uniform since 2002.

In 2002 12 head rows from 96x1311-01 were harvested based upon uniformity and type. In 2002, twelve progeny plots were grown in Berthoud, Colorado. Eleven were selected to be grown out on a 0.2 acre initial Breeders seed in Lucerne, Colorado in 2003 which produced 550 pounds of seed. In 2004 an additional 6.8 acre Breeders seed increase was grown in Lucerne, Colorado which produced 9,420 pounds of Foundation seed.

Neosho has been uniform and stable since 2003. Less than 0.8% of the plants were rogued from the Breeders seed increase in 2004. Approximately 80% of the variant plants were taller height wheat plants, approximately 10% were bronze chaffed wheat plants and approximately 10% the variant plants were awnless wheat plants.

***Exhibit B.***  
***Statement of Distinctness***

Neosho is most similar to the hard red winter wheat 'Thunderbird'. However, it can be easily distinguished by the following morphological characteristics:

- Neosho has a blue-green plant color at boot stage (R.H.S. Chart color number #122B; Lucerne, CO 2003-2004). Thunderbird has a dark green plant color at boot stage (R.H.S. Chart color number #137B; Lucerne, CO 2003-2004).
- Neosho has a short brush hairs on the seed tip (Lucerne, CO 2003-2004). Thunderbird has midlong brush hairs on the seed tip (Lucerne, CO 2003-2004).

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE DIVISION  
BELTSVILLE, MARYLAND 20705

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY  
WHEAT (*Triticum* Spp.)

NAME OF APPLICANT(S) <b>Monsanto Company</b>	TEMPORARY OR EXPERIMENTAL DESIGNATION <b>96-1311-01</b>	VARIETY NAME <b>Neosho</b>
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) <b>800 N. Linbergh Blvd. Creve Coeur, MO 63167</b>		FOR OFFICIAL USE ONLY PVPO NUMBER <b>200500273</b>

## PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.,    or   ) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: \_\_\_\_\_ . Please answer all questions for your variety; lack of response may delay progress of your application.

## 1. KIND:

- 1=Common  
2=Durum  
3=Club  
4=Other (specify) \_\_\_\_\_

## 2. VERNALIZATION:

- 1=Spring  
2=Winter  
3=Other (specify) \_\_\_\_\_

## 3. COLEOPTILE ANTHOCYANIN:

- 1=Absent 2=Present

## 4. JUVENILE PLANT GROWTH:

- 1=Prostrate 2=Semi-erect 3=Erect

## 5. PLANT COLOR (boot stage):

- 1 = Yellow-Green  
2 = Green  
3 = Blue-Green

## 6. FLAG LEAF (boot stage):

- 1 = Erect 2 = Recurved

- 1 = Not Twisted 2 = Twisted

- 1 = Wax Absent 2 = Wax Present

## 7. EAR EMERGENCE:

Number of Days (Average)

Number of Days Earlier Than \*

Same As \*

Number of Days Later Than \*

\* Jagger

\*Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

## 8. ANTHOR COLOR:

- 1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT: (from soil to top of head, excluding awns):

200500273

0	9	0
---	---	---

cm (Average)

0	4
---	---

cm Taller Than

--	--

Same As

cm Shorter Than

\* Jagalene

\* \_\_\_\_\_  
\* \_\_\_\_\_

10. STEM:

A. ANTHOCYANIN

1
---

1 = Absent 2 = Present

B. WAXY BLOOM

2
---

1 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

2
---

1 = Absent 2 = Present

D. INTERNODE

1
---

1 = Hollow 2 = Semi-solid 3 = Solid

5
---

Number of Nodes

E. PEDUNCLE

1
---

1 = Erect 2 = Recurved 3 = Semi-erect

0	9
---	---

cm Length

F. AURICLE

2
---

Anthocyanin 1 = Absent 2 = Present

2
---

Hair: 1 = Absent 2 = Present

11. HEAD: (At Maturity)

A. DENSITY

2
---

1 = Lax  
2 = Middense (Laxidense)  
3 = Dense

B. SHAPE

1
---

1 = Tapering  
2 = Clavate  
3 = Strap  
4 = Other (specify) \_\_\_\_\_

C. CURVATURE

1
---

1 = Erect  
2 = Inclined  
3 = Recurved

D. AWNEDNESS

4
---

1 = Awnless  
2 = Apically awnletted  
3 = Awnletted  
4 = Awned

12. GLUMES: (At Maturity)

A. COLOR

1
---

1 = White  
2 = Tan  
3 = Other (specify) \_\_\_\_\_

E. BEAK WIDTH

2
---

1 = Narrow  
2 = Medium  
3 = Wide

B. SHOULDER

2
---

1 = Wanting 2 = Oblique  
3 = Rounded 4 = Square  
5 = Elevated 6 = Apiculate  
7 = Other (Specify) \_\_\_\_\_

F. GLUME LENGTH

1
---

1 = Short (ca. 7mm)  
2 = Medium (ca. 8mm)  
3 = Long (ca. 9mm)

C. SHOULDER WIDTH

1
---

1 = Narrow  
2 = Medium  
3 = Wide

G. WIDTH

2
---

1 = Narrow (ca. 3mm)  
2 = Medium (ca. 3.5mm)  
3 = Long (ca. 4mm)

D. BEAK

2
---

1 = Obtuse  
2 = Acute  
3 = Acuminate

## 13. SEED:

200500273

## A. SHAPE

1

- 1 = Ovate  
2 = Oval  
3 = Elliptical

## E. COLOR

3

- 1 = White  
2 = Amber  
3 = Red  
4 = Other (Specify) \_\_\_\_\_

## B. CHEEK

1

- 1=Rounded  
2=Angular

## F. TEXTURE

1

- 1 = Hard  
2 = Soft  
3 = Other (Specify) \_\_\_\_\_

## C. BRUSH

1

\*occupies large area of seed tip

- 1 = Short  
2 = Medium  
3 = Long

1

- 1 = Not Collared  
2 = Collared

## G. PHENOL REACTION (See Instructions)

0

- 1 = Ivory  
2 = Fawn  
3 = Light Brown  
4 = Dark Brown  
5 = Black

## D. CREASE

1

- 1 = Width 60% or less of Kernel  
2 = Width 80% or less of Kernel  
3 = Width Nearly as Wide as Kernel

## H. SEED WEIGHT

N A

g/1000 Seed (Whole number only)

## I. GERM SIZE

2

- 1 = Small  
2 = Midsize  
3 = Large

## 14. DISEASE:

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

2

Stem Rust (*Puccinia graminis* f. sp. *tritici*)

Field 4

Leaf Rust (*Puccinia recondita* f. sp. *tritici*) Field races

2

Stripe Rust (*Puccinia striiformis*)

races 0

Loose Smut (*Ustilago tritici*)

4

Tan Spot (*Pyrenophora tritici-repentis*)

0

Flag Smut (*Urocystis agropyri*)

0

Halo Spot (*Selenophoma donacis*)

0

Common Bunt (*Tilletia tritici* or *T. laevis*)*Septoria nodorum* (Glume Blotch)

0

Dwarf Bunt (*Tilletia controversa*)

0

*Septoria avenae* (Speckled Leaf Disease)

0

Karnal Bunt (*Tilletia indica*)

4

*Septoria tritici* (Speckled Leaf Blotch)

4

Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*) Field races

0

Scab (*Fusarium* spp.)

0

Snow Molds

0

Black Point (Kernel Smudge)

0

Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)

0

Barley Yellow Dwarf Virus (BYDV)

0

Rhizoctonia Root Rot (*Rhizoctonia solani*)

2

Soilborne Mosaic Virus (SBMV)

0

Black Chaff (*Xanthomonas campestris* pv. *translucens*)

3

Wheat Yellow (Spindle Streak) Mosaic Virus

0

Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)

4

Wheat Streak Mosaic Virus (WSMV)

Other (specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

## 15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

1

Hessian Fly (*Mayetiola destructor*)

Other (specify) \_\_\_\_\_

0

Stem Sawfly (*Cephus* spp.)

Other (specify) \_\_\_\_\_

0

Cereal Leaf Beetle (*Oulema melanopa*)

Other (specify) \_\_\_\_\_



PLEASE SPECIFY BIOTYPE (where needed)

200500273

0

Russian Aphid (*Diuraphis noxia*)

☐

Other (specify)

0

Greenbug (*Schizaphis graminum*) "C"

☐

Other (specify)

0

Aphids

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

None

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***Exhibit D.***  
***Additional Description of Neosho***

Neosho is a hard red winter wheat bred and developed by AgriPro Wheat. Neosho is a tall semidwarf variety in plant height and has white chaff at maturity. It has medium maturity and excellent straw strength. It has very erect plant type, erect flag leaves and the spikes are erect at maturity. Neosho is resistant to Stem rust and Stripe rust. Neosho is moderately resistant to Powdery mildew, Septoria speckled leaf blotch, Tan spot, Leaf rust and Wheat streak mosaic virus. Neosho has intermediate reaction to Wheat Spindle Streak Mosaic virus. Neosho is susceptible to Hessian fly.

Juvenile growth habit is semierect. Plant color at boot stage is blue green at boot stage. Flag leaf at boot stage is erect and twisted. Waxy bloom is present on the head, stem and flag leaf sheath. Anther color is yellow. Head shape is tapering, middense and awned. Glumes are glabrous, midwide in width and short in length with oblique shoulders and acute beaks. Seed shape is ovate. Brush hairs are short in length and occupy a large area of the seed tip. Seed crease depth is shallow and width is midwide. Seed cheeks are rounded.

Neosho is best adapted to the north-central and north-eastern areas of Oklahoma, central and eastern Kansas and the south-eastern area of Nebraska.

**AgriPro Quality Data 2002-2004**

Year-Loc	Wht Prot	Flr Prot	Norris Hard	Flr Yld%	Peak Ash	PeakHT Time/min	Mix N.U.	Tol.mm	Abs.%	Time /min	Loaf Vol/cc	Grain	Tex	Color
<b>NEOSHO</b>														
2002 - CK	14.1	12.7	63	69.6	0.431	3.00	5.50	886	66.0	2.75	1030	4	2	3
2002 - DW	16.0	14.0	75	67.8	0.438	3.75	5.00	891	66.0	3.25	1010	4	3	4
2002 - IRW	13.3	12.0	65	69.5	0.397	2.50	5.00	744	63.5	2.50	1050	5	3	4
2003 - CK	11.7	9.8	70	71.1	0.394	3.50	5.30	884	63.0	3.70	830	4	3	3
2003 - DL1	15.1	12.4	56	67	0.513	3.25	5.30	896	68.0	4.00	985	4	3	4
2003 - IRW	13.3	11.2	69	69.6	0.444	1.75	5.30	319	61.0	1.90	855	4	3	3
2003 - VT	13.7	12.0	75	71.6	0.408	3.50	5.00	1136	64.0	3.10	1020	3	3	4
2004 - MK	14.5	13.4	101	66.2	0.462	3.25	5.30	689	65.0	3.30	965	4	3	4
2004 - SK	12.6	11.4	85	71.8	0.391	3.50	5.30	774	64.0	4.20	970	4	3	3
<b>Average:</b>	<b>13.8</b>	<b>12.1</b>	<b>73</b>	<b>69.4</b>	<b>0.431</b>	<b>3.11</b>	<b>5.20</b>	<b>802</b>	<b>64.5</b>	<b>3.19</b>	<b>968</b>	<b>4</b>	<b>3</b>	<b>4</b>

**JAGALENE**

2002 - CK	14.5	13.0	67	69.9	0.436	4.50	5.00	955	65.0	4.25	1085	3	3	3
2002 - DW	15.7	14.6	77	65.8	0.455	3.50	5.30	720	66.0	3.00	1035	4	3	3
2002 - IRW	13.0	12.4	58	68.3	0.398	3.00	5.00	676	64.0	3.00	1060	3	2	2
2003 - CK		10.5	73	70.1	0.436	4.00	5.00	1157	62.5	4.40	950	3	3	3
2003 - DL1	14.4	13.2	75	68.7	0.51	3.50	5.30	999	67.0	4.00	1035	4	3	4
2003 - IRW	12.9	11.3	72	69.3	0.448	3.00	5.30	948	61.5	3.00	900	4	3	3
2003 - VT	14.2	12.8	83	72.4	0.39	4.50	5.00	1194	64.5	4.10	1125	4	3	3
2004 - MK	14.0	13.0	95	66.2	0.485	3.25	5.30	732	65.0	3.50	975	5	3	3
2004 - SK	13.0	11.8	90	72.1	0.43	4.50	5.00	1145	65.0	5.10	950	5	3	3
<b>Average:</b>	<b>14.0</b>	<b>12.5</b>	<b>77</b>	<b>69.2</b>	<b>0.443</b>	<b>3.75</b>	<b>5.10</b>	<b>947</b>	<b>64.5</b>	<b>3.82</b>	<b>1013</b>	<b>4</b>	<b>3</b>	<b>3</b>

## 2004 AgriPro Exp#2 SUMMARY

Location:		Partridge, KS		Junction City, KS		Nardin, OK		Salina, KS		Winfield, KS		Avg. Yld	Avg. TW
Ent	Variety	Yield	Test Wt	Yield	Test Wt	Yield	Test Wt	Yield	Test Wt	Yield	Test Wt		
3	Jagalene	44.1	59.9	61.8	62.9	63.9	63.2	81.2	61.3	70.0	64.2	61.8	
10	2137	52.2	58.4	65.0	62.5	47.7	60.3	78.4	60.9	67.5	62.2	60.5	
25	W96x1311-01	47.1	60.4	65.9	63.1	57.1	63.3	86.2	60.6	54.5	62.2	61.9	
15	Ok 102	56.4	59.7	71.8	64.2	47.7	62.1	72.9	60.3	60.1	61.8	61.6	
19	NuHills	47.0	61.3	66.6	64.4	65.8	63.6	78.8	61.4	46.9	61.0	62.7	
13	Overley	57.3	60.8	63.5	63.7	47.4	62.3	79.4	62.1	56.5	60.8	62.3	
46	Fannin	47.3	58.3	68.1	61.8	45.5	61.6	79.7	61.2	58.7	59.8	60.7	
12	2145	49.3	60.5	60.5	63.3	47.3	61.8	84.4	61.9	57.3	59.8	61.9	
5	Cutter	43.9	58.8	59.7	62.7	47.9	61.7	83.3	61.9	62.1	59.4	61.3	
8	Karl 92	47.2	59.6	59.6	63.0	46.8	62.5	69.4	59.8	72.2	59.0	61.2	
18	GM 10006	49.3	60.1	61.2	63.2	53.1	62.8	83.3	61.9	47.6	58.9	62.0	
11	2174	53.5	59.6	64.2	63.9	53.0	62.0	77.8	60.0	44.0	58.5	61.4	
22	Prairie White	41.8	59.1	61.8	62.1	46.6	61.5	80.3	61.5	61.6	58.5	61.0	
6	Pecos	37.3	57.6	58.4	63.7	47.0	61.9	74.9	60.5	68.9	57.3	60.9	
2	Coronado	41.4	57.3	62.8	62.8	60.5	61.5	75.1	59.6	46.5	57.3	60.3	
23	Trego	41.5	60.6	64.8	63.9	52.9	62.0	77.6	61.9	46.7	56.7	62.1	
20	NuFrontier	36.8	58.3	58.2	61.7	48.2	61.7	80.3	60.6	59.9	56.7	60.6	
14	Ok 101	42.6	59.3	64.6	62.4	47.3	60.2	80.4	60.0	47.9	56.6	60.5	
16	Gem	43.6	58.8	62.9	61.5	47.6	60.0	81.0	60.0	46.6	56.3	60.1	
7	Dominator	44.4	60.0	60.1	63.2	45.7	61.6	73.2	61.3	57.6	56.2	61.5	
21	Bakers White	38.5	57.8	59.7	61.3	46.0	61.1	78.7	61.5	46.7	53.9	60.4	
9	Jagger	42.4	55.8	56.8	60.5	48.8	59.7	71.7	58.4	48.1	53.5	58.6	
1	Hawk	33.1	57.8	53.3	60.0	47.2	60.7	75.2	59.6	56.1	53.0	59.5	
17	Wahoo	33.4	57.4	58.5	59.8	47.0	58.5	76.4	59.9	47.1	52.5	58.9	
4	Big Dawg	28.7	55.0	53.9	62.8	46.7	61.1	65.7	59.3	56.8	50.3	59.5	
Average		44.9	58.4	63.3	62.2	50.4	61.1	80.0	60.6	57.5	59.2	60.6	

## AgriPro Wheat Central Plains Three Year Yield Summary

Variety	Yield				Test Weight			
	2002	2003	2004	AVG	2002	2003	2004	AVG
W96x1311-01	47.8	91.4	62.2	65.0	60.6	60.1	61.9	60.1
Jagalene	49.5	93.2	66.5	64.8	54.4	59.8	61.6	59.1
2145	41.9	87.4	59.8	63.0	59.9	58.7	61.9	60.2
Cutter	47.0	93.8	55.6	61.9	58.5	58.9	60.0	57.2
DOMINATOR	41.3	81.1	58.4	58.3	59.8	60.3	61.7	59.8
2174	39.6	80.1	57.8	57.8	56.6	59.0	60.1	58.5
JAGGER	47.7	91.3	53.8	57.7	57.4	58.4	58.6	57.3
TREGO	43.4	86.9	62.4	57.7	58.7	59.5	61.0	59.4
2137	46.5	87.1	62.6	57.5	55.5	57.8	59.6	57.3
HAWK	43.6	85.8	59.4	56.4	58.5	58.1	59.6	57.5
CORONADO	39.3	80.1	61.6	55.3	56.6	58.3	59.7	55.9
PECOS	39.1	72.5	57.3	54.9	58.2	58.0	60.9	58.6
BIG DAWG	38.2	79.2	50.3	53.5	56.8	59.5	59.5	56.5
Averages:	48.0	91.4	61.0	65.4	55.8	59.3	60.4	58.2

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E  
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) <b>Monsanto Company</b>	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER <b>96x1311-01</b>	3. VARIETY NAME <b>Neosho</b>
4. ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) <b>800 N. Linbergh Blvd. Mail Zone:E3NA Creve Coeur, MO 63167</b>	5. TELEPHONE (include area code) <b>314.694.6089</b>	6. FAX (include area code) <b>314.694.7250</b>
	7. PVPO NUMBER <b>200500273</b>	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Please see following page.

## PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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***Exhibit E.***  
***Statement of the Basis of Applicant's Ownership***

The variety for which Plant Variety Protection is hereby sought was developed by Dr. Rollin Sears, an employee of AgriPro Wheat. By agreement between employees and AgriPro Wheat all rights to any invention, discovery, or development made by the employee while employed by AgriPro Wheat, were assigned to AgriPro Wheat, with no rights of any kind pertaining to 'Neosho' being retained by the employees.

By contractual agreement the variety 'Neosho' was purchased from AgriPro Wheat, a business unit of Advanta USA, Inc. in June of 1996 and is currently owned by Monsanto Company.